

## Statement of Required Capabilities Future Combat System of Systems (FCS)

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Purpose. This document provides a Statement of Required Capabilities in support of the FCS Mission Need Statement (MNS). The document is organized as follows:

- A. Responsiveness
- B. Deployability
- C. Agility & Versatility
  - Maneuverability
  - Mobility
  - C4 and Leadership
  - Soldier
  - Information
  - ISR/TA
- D. Lethality
- E. Survivability
- F. Sustainability
- G. Training

### A. Responsiveness.

**Responsiveness** has qualities of time, distance, and sustained momentum. It includes the ability to capitalize on the positioning of forward-deployed forces and supplies as well as strategic lift. It demands close, continuous coordination between Army component commanders and joint and interagency decision making bodies. To be credible, The Army must be responsive enough to counter any threats to American and allied interests anywhere in the world. Responsiveness also encompasses the political will of the Nation to deploy forces in response to a crisis or threat. For American forces to be successful, adversaries must realize that American land power can prevent them from achieving their aims and also recognize the willingness of the American people to support military action. (FM 1)

(1) **Capability.** Insert FCS combat unit into austere theater through multiple unimproved entry points without relying on fixed ports and staging bases.

(2) **Capability.** Deploy FCS combat unit as a coherent combined arms package by air, ground or sea in support of early and forcible entry operations.

(3) **Capability.** Upon arrival, FCS combat units immediately employ over operational distances to designated area(s) as an integrated combined arms team.

(4) **Capability.** FCS combat tactical units are immediately capable of conducting distributed and continuous combined arms full spectrum operations, day and night, in

open, close and complex terrain throughout the battlespace without undergoing reception and staging and can self-sustain military operations for up to 3 days upon arrival. Minimal prep time is required from alert to deploy and from deploy to employ after arrival.

(5) **Capability.** Vertical and horizontal maneuver of FCS units support multiple military operations.

(6) **Capability.** Support early or forcible entry capability.

## **B. Deployability.**

To be truly responsive, Army forces must be **deployable** and capable of quickly and rapidly concentrating combat power in an operational area. The Army goal is deploying a brigade combat team anywhere in the world in 96 hours after liftoff, a division in 120 hours, and five divisions in 30 days. This will require enhanced systems and capabilities. Systems must be transportable, logistics must be focused and flexible, and a culture within The Army that accepts deployment readiness as a way of life must be sustained. Army forces need support from the other services to achieve the required levels of deployability. (FM 1)

(1) **Capability.** Be transportable by inter/intra-theater land, sea vessel and airlift anywhere in the world; are more deployable with reduced deployment tonnage; be transportable by C130 profile aircraft and advanced vertical lift such as Joint Tactical Rotorcraft (JTR), Advanced Theater Transport (ATT), or Theater Support Vessel (TSV).

(2) **Capability.** Enable the deployment of a brigade combat team anywhere in the world in 96 hours after liftoff, a warfighting division on the ground in 120 hours, and five divisions in theater in 30 days.

(3) **Capability.** Be capable of rapid inter-theater to intra-theater transshipment to gain operational momentum and meet deployment objectives.

(4) **Capability.** Integrate into Enroute Mission Planning and Rehearsal System (EMPRS) from alert through deployment to employment. Support enroute mission planning, rehearsal, battle command, and ability to integrate into gaining theater command during movement by air, land and sea.

(5) **Capability.** Provide embedded joint in-transit visibility systems lash-up for movement planning and tracking.

### C. Agility and Versatility

Army forces must possess the **mental and physical agility** to transition among the various types of operations, just as we have demonstrated the tactical warfighting agility to task organize on the move. Agile forces will be required to transition from stability operations and support operations to warfighting and back. As the Army crafts a more rapidly deployable force structure, it must continue to grow leaders who can adapt quickly to change. The pace and complexity of operations will increase, especially as military operations in the information environment become more important. (FM 1)

**Versatility** must be emphasized in doctrine and training at all levels. Our organizations must be able to generate formations that can achieve sustained land dominance at any point and in all environments. This must be done with minimal adjustments and in minimal time. Currently our warfighting organizations can be tailored to respond to the any contingency. However, the future will require even more versatile forces. Increasing versatility requires special consideration of structuring and equipping initiatives as well as training of personnel to respond to unfamiliar scenarios. (FM 1)

- (1) **Capability.** Be full spectrum capable, optimized for offensive operations.
- (2) **Capability.** Enable quick transitions between changes in task, purpose and direction, maneuvering into and out of contact without sapping operational momentum. FCS units adapt faster than the enemy can.
- (3) **Capability.** Enable task reorganization on the move.
- (4) **Capability.** Accept legacy and interim system tailoring.
- (5) **Capability.** Enable battle command on the move supported by C4ISR architecture for continuous estimate of the situation on the move. Share integrated common operating picture (COP) to enable early understanding of threat actions / intentions. COP is defined as critical combat information (red, blue, non-combatant, terrain, weather) tailored to unit task and purpose. Enable visualization and dissemination of tactical scheme by combined arms mission orders with graphic overlays. Changes in leadership that occur during battle will be automatically disseminated to appropriate levels with shared COP to enable continuity of command.
- (6) **Capability.** Enable initiation of combat on our terms, at a time and place, with a method of our own choosing. Be resilient and durable to withstand unexpected actions on contact.

### **Maneuverability.**

(7) **Capability.** Enable decisive maneuver, horizontal and vertical, day and night, in all terrain and weather conditions synchronized with Army and Joint fires and RSTA.

(8) **Capability.** Provide unsurpassed mobility over operational distances as an integrated combined arms unit. Provide superior tactical maneuverability in all terrain (open, complex and urban) and weather as a dismounted and mounted combined arms force without compromising tactical unit integrity.

- Provide rapid tempo for gaining and maintaining initiative and momentum.
- Negotiate all-surfaces: on and off-road, improved or unimproved trails.
- Enable water crossing.
- Provide enhancement that will enable soldiers to conduct dismounted maneuver with load bearing equipment and load not to exceed 40 pounds, enable Soldier stamina through prophylaxis and enhance endurance in hot, cold, dry weather with advanced uniform ensemble.

(9) **Capability.** Support combined arms maneuver of combat tactical units to execute:

- Mounted operations enabled by dismounted forces
- Dismounted operations enabled by mounted forces
- On occasion, dismounted operations
- On occasion, mounted operations

### **Mobility:**

(10) **Capability.** Provide superior capability to detect presence, identify disposition and counter anti-tank and anti-personnel (AT/AP) mines above and below surface, booby traps such as side-charge and remote detonated mines. Also, need ability to conduct route reconnaissance with forward looking and off-road sensors to clear at greatly improved speeds (at least 50 kph).

- Must have standoff means for detection and defeat of obstacles.
- Mark or perform in-stride counters to neutralize mines at a distance.
- Detect and locate other man-made obstacles.

(11) **Capability.** FCS architecture enables real-time dissemination of reported obstacles throughout the force.

(12) **Capability.** Provide capability, organic to tactical units, to breach disrupting and fixing obstacles in-stride.

(13) **Capability.** FCS provides organic capability to cross narrow gaps, such as streams and irrigation ditches without loss in operational momentum.

(14) **Capability.** Enable dismounted assaults in urban terrain:

- Multi-story building entry through roofs and upper floors.
- Entry into and through subterranean complexes.
- Wall breaching (50" x 70" holes, all types of construction).

(15) **Capability.** Enable protective countermobility and survivability position support available at transition to defensive operation.

**(C4) and Leadership:**

(16) **Capability.** FCS combat unit is a networked force, horizontally and vertically integrated from strategic to tactical level to provide dominant situational understanding. It is interoperable with Army legacy and interim systems, joint and inter-agency systems and adaptable to allies, coalitions and NGOs systems with automatic language translation ability that can be tailored to local dialects.

(17) **Capability.** Facilitate operational architectures and information exchange requirements tailored to unit task and purpose.

(18) **Capability.** Provide collaborative, distributed decision aids. FCS must provide a mission-centric, embedded information system that enables commanders to effectively lead during dynamically changing and offensive operations anywhere on the battlefield whether stationary or on the move to:

- Maintain situational understanding at all times.
- Identify schemes of maneuver, opportunities, decisive points, terrain and weather updates, enemy vulnerabilities, and conceptualize solutions through accelerated collaborative planning, rehearsal and simulation.
- Make reasoned decisions based on information available.
- Direct decisive action through communicating orders, intent and supporting operational graphics from the commander's battle command system.
- Synchronize maneuver, fires and RSTA.
- Perform A2C2

(19) **Capability.** The FCS tailorable, networked battle command system provides dismounted and mounted forces, their leaders and Soldiers, with mutually supporting and relevant SU.

(20) **Capability.** Provide dynamic, extended range, redundant communications through a network that is:

- Highly integrated, single, ubiquitous, distributed, and capable of greatly increased yet scaleable data rates.
- Open, multi-layered architecture with multiple paths that provide a level of redundancy for assured communications that can be quickly diagnosed and are self-

healing. Allow voice and data routing around inoperative nodes without interruption of information flow and situational awareness.

- Pervasive and optimized for mobile operations, where all platforms are integrated nodes which do not rely on stationary attended nodes and allow data management independent of the communication architecture.
- Leverage opportunistic use of the spectrum and commercial derivatives.
- Self-organizing and extendable – add entities to the network in a seamless manner and is permission based to meter who enters the layer.
- Backward adaptable to legacy and interim systems.
- Improved reliable, redundant NLOS communications to optimize connectivity through automatic link establishment to support operations in restricted, urban and subterranean environments.

(21) **Capability.** FCS network deploys without requiring space in the airflow for dedicated communications assemblages. Network must be fundamentally sound without signal sites.

(22) **Capability.** Employ a variety of means to connect users with local and global networks, and must not be dependent on a single means anywhere in the network.

(23) **Capability.** Provide common, general-purpose networks that all classified / unclassified customers can use and are interoperable with Joint networks. Establish appropriate classification at the entity.

(24) **Capability.** Contain information systems and networks with low, near zero, probability of detection (LPD / LPI), interception and exploitation.

- Detect and prevent intruders and malicious software; identify points of intrusion and origin, information compromised, and information introduced into the network. The system must automatically report such events and take actions to minimize the impact of such events on the performance of the network without inhibiting the network.
- Provide embedded information assurance / protection to deny network access to unauthorized personnel or systems.
- Provide active and passive countermeasures to protect the electromagnetic spectrum against conventional and unconventional threats.
- Accomplish POSNAV without continuous emission that reveals force disposition to threat.

### **Soldier:**

The combination of quality soldiers, competent leaders, and cohesive units creates a versatile, powerful force. The Army needs competent and versatile soldiers able to accomplish missions in a challenging and ever changing global environment. They must be able to successfully accomplish tasks while operating alone or in small groups. Soldiers and leaders must exercise mature judgment and initiative under stressful circumstances and be capable of learning and adapting to meet the demands of full spectrum operations. Soldiers must also be technically and tactically proficient. They must employ and maintain increasingly complex and sophisticated equipment. Current and future technology requires skilled soldiers who understand their systems. Regardless of the importance of equipment or the expansion of technological capabilities, soldiers are more important than machines. Soldiers, not equipment, accomplish missions and win wars. Leadership links soldiers' technical and tactical competence to operational success. Achieving combined arms effectiveness with complex systems demands adaptive and flexible soldiers. *(FM 3.0)*

(25) **Capability.** Decrease task complexity and execution times to improve performance while minimizing sensory, cognitive, and physical demands on the soldier.

(26) **Capability.** Enhance Soldier endurance and stamina to fight effectively under all environmental conditions.

- Full spectrum operations - Offensive, Defensive, Stability and Support
- Full range of conflict – MTW, SSC, PME
- Varied terrain
- All-weather
- NBC
- Mounted or Dismounted

(27) **Capability.** Possess mobility enhancements to reduce Soldier workload through environmental ride quality and task automation.

- Exploit unmanned technology in manned systems to enhance continuous 24-7 operations.

### **Information:**

(28) **Capability.** FCS networks enable efficient information management to move vital information in a timely manner through the network tailored to unit task and purpose. Continuously fuse, monitor and disseminate information from a variety of sources to support CCIR, combat action, decision-making, and analysis. Enable automated integration and dissemination to appropriate levels. Provide information to leaders in usable forms for estimate of situation, to retransmit to subordinates, or to 'cut and paste' into orders.

(29) **Capability.** Establish an adaptive learning organization with embedded capabilities to build and manage a rapidly evolving library of friendly and enemy

DTLOMS and lessons learned through semi-automated capturing and archiving of data from humans, sensors and robots. This provides a CTC-like AAR framework to capture what happened in training, why it happened and how to fix.

(30) **Capability.** Provide ability to see, understand and act first, then finish decisively. Leaders and staffs need situational awareness updated in near-real time, from a wide variety of automated and human sources to provide the means for situation understanding, and establish, maintain and distribute a synthesized COP tailored to unit task, purpose and situation. Integrate joint sensors to fulfill friendly force, terrain, weather, and enemy combat information requirements. Integrate joint sensors to fulfill friendly force, terrain, weather, and enemy combat information requirements.

(31) **Capability.** Provide digital 3D mapping tool for high terrain resolution to enable: C2 of small unit tactical action in close, complex terrain, virtual rehearsals, and terrain analysis. Also allows visualization of inside buildings and subterranean dimension.

#### **Intelligence, Surveillance, and Reconnaissance (ISR)/TA:**

(32) **Capability.** Employ improved sensors to see the full range of operational variables – terrain, weather, friendly and enemy force, non-combatants and detect threat actions in all environments. Manned and unmanned ground, air and space means extend vision beyond line of sight to gain timely combat information through passive and aggressive RSTA networked into an integrated COP for unprecedented situational awareness and understanding.

(33) **Capability.** Perform automated pattern analysis to detect, locate and identify enemy combatants and systems. Eliminate unique single point ground control, and fusion stations. Enable situational understanding by standoff, staring (loitering capability) to gain indications:

- Moving and stationary entities that are mounted, dismounted or hidden.
- Signatures as signal, glint and flash.
- Under all terrain and weather conditions.
- Against enemy entities that are dispersed, covered and concealed, masked and fleeting.
- Sort through decoys, deception and disinformation.
- See through walls in urban operations.
- See terrain and identify obstacles.

(34) **Capability.** Enable development of the situation out of contact rapidly to the fidelity needed to initiate combat on our terms, engage at tactical standoff, and maneuver to positions of advantage prior to contact. Provide highly precise targetable data from sensor to shooter. Enable reliable, timely BDA.



(35) **Capability.** Sort out from a variety of enemy data entries what is most dangerous and high payoff for engagement at tactical standoff to set favorable conditions for tactical maneuver.

(36) **Capability.** Integrate synergistic use of Joint and Army manned and unmanned, air and ground RSTA to gain and maintain contact with enemy elements and to provide high-resolution combat information on terrain and weather. Area sensors cue more discrete sensors. Employ robotics for high-risk situations. Access joint and national assets through reach back. Facilitate C2 of RSTA to maximize understanding of the battlefield. Identify areas that have shortcomings and re-task to fill the void.

(37) **Capability.** Provide near-real time combat identification of friend, foe and noncombatant across the spectrum of operations through platform-to-platform, platform-to-soldier, soldier-to-platform, and soldier-to-soldier interrogation. Seamlessly integrate joint combat identification measures.

(38) **Capability.** Enable blinding the enemy through use of obscurants, jamming, signature reduction, deception, and pattern avoidance techniques to see and understand first.

#### **D. Lethality.**

**Enhanced lethality** will allow Army forces to destroy any opponent quickly, with shattering effect. Lethal Army forces can combine the elements of combat power to provide overwhelming and decisive force at the right time, at the right place, and for the right purpose. (FM 1)

(1) **Capability.** Enable command and control needed to synchronize fire, maneuver and RSTA in real time to close with and destroy the enemy. Provide very accurate target location to get fires in very close support for the tactical assault.

(2) **Capability.** Provide the capability to destroy enemy formations at longer ranges, with smaller calibers, greater precision, and more devastating target effects without frequent positioning through technical improvements in weaponry and munitions. Key enablers include organic line of sight, beyond line of sight, and non-line of sight fires. These fires overmatch the enemy in all conditions and environments, and are based on one shot – one or more kill disciplines and designs that overmatch the projected enemy capability in the areas of range,  $P_{ACQ}$ ,  $P_{HIT}$ , and  $P_{KILL}$  (LOS, BLOS, lethal, non-lethal and KE, CE, and DE) with scaleable effects.

(3) **Capability.** Employ advanced, highly mobile, Army and Joint fire delivery systems capable of operating singularly or in small groups to provide extended range, internetted, responsive precision or volume fires on demand in support of maneuver.

(4) **Capability.** Employ improved precision munitions with a broad range of effects and capabilities to loiter or be maneuvered in flight, enabling man-in-the-loop terminal control of precision effects even after launch.

(5) **Capability.** Provide rapid gun firing capability optimized for developing situation in contact, responding to unexpected actions on contact, executing fire and maneuver and tactical assault. These fires will be optimized for KE overmatch.

(6) **Capability.** Provide area suppression and obscuration capability.

(7) **Capability.** FCS sensor to shooter linkage enables decision to engage in seconds using automated, semi automated or manual fire control, distribution and clearance procedures; provides automated target identification to reduce latency in providing effects.

(8) **Capability.** Employ small caliber penetrators with increased accuracy that reduce ammunition weight and enable system as well as unit agility.

(9) **Capability.** Scale per METT-T from lethal to non-lethal effects to focus effects precisely on selected targets and capabilities while separating targeted formations from the population without collateral damage and non-combatant casualties.

(10) **Capability.** Employ precision delivered, self-healing minefields that can be remotely armed and disarmed.

(11) **Capability.** Maximize lethality of dismounted operations, while decreasing the weight footprint of the soldier, by shifting fires functions from his back to enabling platform systems.

(12) **Capability.** Provide 360 degree long-range acquisition and targeting, and early attack / first round assured hit / kill technology at smaller caliber – ensuring overmatch in acquisition, attack and re-attack of enemy forces even if outnumbered. All capabilities must be scalable and will be employable on the move.

(13) **Capability.** Proactively engage LOS/BLOS/NLOS threat targets based on target detection and identification information provided in the COP.

## E. Survivability.

**Survivability** is the ability to combine systems, tactics, operations, and processes that afford optimum protection to deployed Army forces. Speed and lethality are essential characteristics for achieving survivable forces. Ground and air platforms that employ the best combinations of low observability, ballistic protection, long-range acquisition and targeting, early attack, and high first-round hit-and-kill technologies will be required to ensure the desired degrees of survivability. (FM 1)

(1) **Capability.** Provide maximum protection at the individual Soldier level, whether that Soldier is on a platform or on the ground. Protect soldiers from ballistic, flame, thermal, and Chemical Biological (CB) threat.

(2) **Capability.** The Soldier and platforms will leverage integration of lighter, more effective ballistic protection (composite materials) with active and passive protection systems to enhance survivability against KE, and current and projected enemy lethal effects.

(3) **Capability.** Ground platforms in FCS will leverage the best combination of:

- Low observable technologies to degrade enemy detection and terminal targeting from all spectrums by signature management and stealth capabilities.
- Ballistic protection
- On-board immediate multi-spectral capabilities as well as the ability to employ wide area, long duration multi-spectral obscurants.
- Long-range acquisition.
- Early discrete targeting, shoot first every time, and target destruction each time we pull a trigger.
- Highly responsive suppressive fires
- Camouflage

(4) **Capability.** FCS integrates into cooperative direct counter fire systems to 'revenge' kill enemy systems engaging or preparing to engage friendly systems.

(5) **Capability.** Provide improved standoff sensor / detector capability to provide real-time warning and dissemination to protect the force against NBC hazards. Require multiple multi-functional networked sensors for appropriate situation awareness. Be capable of plugging into homeland force protection systems.

(6) **Capability.** Provide improved early warning and defeat of enemy ground and air launched conventional and smart weapons – rockets, cannon, and smart munitions by proactive precision strikes, then intercept mechanism.

(7) **Capability.** Gain improved early warning from Theater Air and Missile Defense (TAMD) sources and ability to intercept enemy air threats, primarily helicopters and Unmanned Aerial Vehicles (UAVs), in a multi-functional all-arms approach. Unit of

employment is responsible for more dangerous air threats such as cruise missiles and fixed wing aircraft.

(8) **Capability.** Support counter-reconnaissance effort to blind enemy RSTA through use of obscurants, jamming, signature reduction, deception, disinformation, and pattern avoidance techniques. Employ RSTA to detect and find, then defeat, disrupt or neutralize enemy sensors through security operations.

(9) **Capability.** FCS systems must have sufficient hardening from Directed Energy (DE) weapons, such as electro-magnetic pulse (EMP) and high-powered microwave.

(10) **Capability.** Employ robots to perform manpower intensive, high-risk functions such as RSTA missions in urban operations (inside buildings and the subterranean dimension) and reconnaissance / reduction of minefields.

(11) **Capability.** Must have standoff means to detect and neutralize mines, booby traps.

## **F. Sustainability.**

Army forces must be sustainable across the spectrum of conflict. **Sustainability** requirements reflect the continuous, uninterrupted provision of combat service support to Army forces. Sustainability in a full spectrum Army will require a combat service support reach capability that allows commanders to reduce stockpiles in theater while relying on technology to provide sustained velocity management and real-time tracking of supplies and equipment. This includes the requisite combat support—such as, military police, military intelligence, and signal corps—and combat service support—such as, medical, transportation, maintenance, legal, religious, personnel, and finance corps—to support the force. (FM 1)

(1) **Capability.** Enable aggressive battlespace reduction in the maneuver sustainment footprint of the Unit of Action and demand for replenishment. Unit of Action will have fewer vehicles and leverage reach back capabilities.

(2) **Capability.** Enable Unit of Action to organically sustain itself for 3 days of high tempo operations without replenishment from external sources in continuous combat in mid to high intensity conflict. Be self-sustainable for up to 7 days in low-end conflict and peacetime military engagement.

(3) **Capability.** Enable significant sustainment effectiveness and efficiencies through:

- Innovative, multi-modal distribution concepts.
- Ultra-reliable and/or redundant components to remain operationally effective for the full 3 / 7-day mission period with minimal pulsed service or repair organic to the Unit of Action.

- Commonality across formations, in platforms and components, to simplify and reduce sustainment, support multi-functionality, reduce the many personnel and skills required in today's organizations, and contribute to simplification of deployment, maintenance and training.

- New power generation and high fuel efficiency with reduced dependence on petroleum products. Minimize use of external power generators.

- Simplified systems maintainability to reduce maintenance and replenishment requirements. System maintainability also will allow crews to perform on-site repairs. Like and self-recoverability of platforms that enables rapid evacuation.

(4) **Capability.** Reduce demand and minimize the maneuver sustainment burden on unit effectiveness through balanced system reliability, redundancy and repair, to include embedded diagnostics and prognostics as well as modular component design. Responsive and on-demand sustainment is centralized at Unit of Action level.

(5) **Capability.** Provide a system of potable water generation and replenishment at every echelon to minimize the need for special-purpose units and demands.

(6) **Capability.** FCS lethal effects produce multiple, single round kills at the smallest caliber and with increased accuracy and effectiveness to reduce ammunition weight and cube to enable system, as well as unit agility.

(7) **Capability.** Enable modularity by accepting rapid force tailoring for increasing force versatility, operational flexibility, and agility in the UA area of operations.

(8) **Capability.** Provide a knowledge-based C4ISR architecture that supports reach to local, regional, and non-deployed sources both governmental and non-governmental.

(9) **Capability.** Provide secure capability, passively and actively, to monitor, report and submit requests to facilitate anticipatory sustainment, as well as to enhance blue COP to build, generate, and sustain maximum combat power during military operations.

(10) **Capability.** Provide revolutionary means of transporting and sustaining people and materiel to leverage new ground and aerial concepts for delivery.

- Transport using standard / non-standard, manned and unmanned, organic and external systems.

- Maneuver sustainment functions that require organic mobility will not degrade deployability, agility, and maneuverability of combat forces. Transport of maneuver sustainment must be survivable over unsecured Lines of Communication (LOC).

- Enable quick cross leveling of supplies between platforms and units in contact and on the move. Leverage pre-configured packaging and platform-embedded materiel handling and lift for rapid, accurate and agile resupply that minimizes

demand on soldiers.

- Dynamic re-routing and tracking of supply delivery as priorities dictate.

(11) **Capability.** Dismounted forces must be self-sustaining during continuous operations for at least 24 hours. Enable increased endurance and cognitive awareness of soldiers for the assault by removing many functions from the soldier's back to systems or platforms. MULE-like robotic capability will perform a variety of sustainment / replenishment functions on a highly agile, light, but survivable platform to include:

- Carrying dismounted soldier loads.
- Operating in terrain requiring dismounted operations.
- Performing non-standard CASEVAC and services such as battery re-charging.
- Delivering classes of supply from battalion through company to soldier to include resupply of ammunition.
- Performing combat tasks such as recon of high-risk areas.

(12) **Capability.** Employ robotic systems to perform redundant and appropriate maneuver sustainment tasks in order to enhance continuous operations.

(13) **Capability.** Enable medical treatment and evacuation of wounded soldiers across echelons to standard. FCS enables rapid medical diagnosis and triage, commander estimate of soldier medical status, and provides standard medical support.

- Platforms capable of carrying dismounted soldiers must have the ability to carry litter patients for extraction, transportation of severely injured casualties, and execution of in-stride casualty transfer to FCS medical variants.
- All manned FCS platforms capable of transporting and extracting casualties will have the ability of performing telemedicine/teleconsultation support between FCS personnel, combat lifesavers, combat medics, unit medical elements, and higher level medical treatment facilities.
- Enable the ability to treat on the move, hold, and transport casualties until evacuation or extraction. This ability provides far forward resuscitation and stabilization with an internal "stabilized" area for surgical intervention and treatment on the move. It also includes the ability to provide a fully automated, self-contained intensive care environment capable of maintaining a stable casualty for up to 72 hours.

## **G. Training:**

Every day, the Army trains soldiers and units while developing leaders. Effective training is the cornerstone of operational success. It is a full-time job for commanders in peacetime and continues when units deploy. **Training** to high standards is essential for a full spectrum force; Army forces must train to, and maintain, the highest readiness levels. Battle-focused training on combat tasks prepares soldiers, units, and leaders to deploy, fight, and win. (FM 3-0)

(1) **Capability.** Support adaptive training enabling team proficiency with a common set of operational user interfaces, (look, feel, and function).

(2) **Capability.** To enable responsiveness, all aspects of the system of systems must be easy to learn, user friendly, preclude catastrophic mistakes, and facilitate operational competence. To achieve this end, a formal and accountable “Usability Engineering” process must be rigorously and systematically incorporated into the developmental process.

(3) **Capability.** Validate the training construct through user trials during the acquisition process simultaneously engineering functionally sound and reliable training systems.

(4) **Capability.** Enable operators, maintainers, unit leaders, and staff planners to be trained in system functions by leveraging any or a combination of networked, embedded, virtual, constructive or live training mode anywhere, any time.

(5) **Capability.** Develop, through training and experience, the thinking, confident, versatile, adaptive, and seasoned leaders at the tactical level required for the digitized, rapidly deployable objective force.

(6) **Capability.** Develop an “on-the-platform” simulations/simulator that enables crews to conduct multiple drills on-the-move without external training aids or facilities.